UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,358	01/25/2001	Ashish Thusoo	256/295	7894

7590 04/09/2004	EXAMINER
PETER C. MEL	TO, BAOQUOC N

PETER C. MEL
BINGHAM McCUTCHEN LLP
THREE EMBARCADERO CENTER
SUITE 1800
SAN FRANCISCO, CA 94111-4067

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to. ·

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1.   Claims 1-16 are pending in this application and claims 17-32 are added on

amendment filed on 11/13/03.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 5, 9 and 13 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

3.   Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cochrane et al. (US. Patent No. 6,581,205).

Regarding on claims 1 and 17, Cochrane teaches a method for applying a row

from a source table to a destination table, the method comprising:

Selecting first column from a source table (column A) (col. 6, lines 65-67);

Selecting a second column from a destination table (MV) (col. 6, lines 65-67);

Performing an outer join (outer join) operation on the source table and the

destination table using the first and second columns (col. 7, lines 1-6);

Cochrane updating each row in the destination table with a row from the result of the outer join operation containing a matching element in the first and second columns; and inserting into the destination table each row from the result set of the outer join operation with a non-matching element in the first and second columns. Cochrane teaches, "to determine an insert or update is required, a DELTA-T table may be recreated containing two rows; one to delete group A2 and the other to insert/update group A3" (col. 5, lines 57-60). In addition, Cochrane teaches "insert returns any non-matching groups, whereas the second operation, the update, return all matching groups. These two operations can be combine together into an outer join, which return both matching and non-matching group" (col. 6, lines 22-67). This teaches the results of the outer-join operations are the updating all matching and inserting any non-matching. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include the updating the matching and inserting all non-matching as the result of the outer-join in order to maintain the consistency between the tables.

Regarding on claims 2 and 18, Cochrane teaches the combining the rows in the source table that the first column has unique element in each row (col. 5, lines 50-67).

Regarding on claims 3 and 19, Cochrane teaches the combining step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 5, lines 55-67; and

Creating a groups of rows, wherein each row in the group of rows contains a matching element in the first column (col. 5, lines 55-67);

Combining the group of rows into a single row (col. 5, lines 55-67).

Regarding on claims 4 and 20, Cochrane teaches the outer join operation uses an equal comparison operator for a comparison statement (col. 5, lines 55-67).

Regarding on claims 5 and 21, Cochrane teaches a single query language statement to insert a new row or update an existing row in database table, the statement implementing a process comprising the steps of:

Selecting from a source table a first column comprising a plurality of elements (column A) (col. 6, lines 65-67);

Selecting from a destination table a second column comprising a plurality of elements (MV) (col. 6, lines 65-67);

Determining a set of matching rows based upon the success of a comparison operation on an element in the first column and an element in the second column (col. 5, lines 64-67 to col. 6, lines 1-8);

Determining a set of non-matching rows based upon the failure of a comparison operation on the first column element and the second column element (col. 5, lines 64-67 to col. 6, lines 1-8);

Cochrane updating the desitination table with the set of matching rows; and inserting into the destination table the set of non-matching rows. Cochrane teaches, "to determine an insert or update is required, a DELTA-T table may be recreated containing two rows; one to delete group A2 and the other to insert/update group A3" (col. 5, lines

57-60). In addition, Cochrane teaches "insert returns any non-matching groups, whereas the second operation, the update, return all matching groups. These two operations can be combine together into an outer join, which return both matching and non-matching group" (col. 6, lines 22-67). This teaches the results of the outer-join operations are the updating all matching and inserting any non-matching. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include the updating the matching and inserting all non-matching as the result of the outer-join in order to maintain the consistency between the tables.

Regarding on claims 6 and 22, Cheng teaches combining the rows in the source table, wherein the resulting source table has a unique element in each row of the first column (col. 8, lines 39-42).

Regarding on claims 7 and 23, Cheng teaches the combining step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contains a matching element in the first column (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 8 and 24, Cheng teaches the comparison operation uses an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Regarding on claims 9 and 25, Cochrane teaches a method for upserting a
source table with a destination table in a single query language, the method comprising:

Selecting from a source table a first column comprising a plurality of elements
(column A) (col. 6, lines 65-67);

Selecting from a destination table a second column comprising a plurality of
elements (MV) (col. 6, lines 65-67);

Cochrane updating each row in the destination table with a row from the result of
the outer join operation containing a matching element in the first and second columns;
and inserting into the destination table each row from the result set of the outer join
operation with a non-matching element in the first and second columns. Cochrane
teaches, "to determine an insert or update is required, a DELTA-T table may be
recreated containing two rows; one to delete group A2 and the other to insert/update
group A3" (col. 5, lines 57-60). In addition, Cochrane teaches "insert returns any non-
matching groups, whereas the second operation, the update, return all matching
groups. These two operations can be combine together into an outer join, which return
both matching and non-matching group" (col. 6, lines 22-67). This teaches the results
of the outer-join operations are the updating all matching and inserting any non-
matching. Therefore, it would have been obvious to one ordinary skill in the art at the
time of the invention was made to include the updating the matching and inserting all
non-matching as the result of the outer-join in order to maintain the consistency
between the tables.

Regarding on claims 10 and 26, Cheng teaches combining the rows in the source table, wherein the resulting source table has a unique element in each row of the first column (col. 8, lines 39-42).

Regarding on claims 11 and 27, Cheng teaches the combining the step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contains a matching element in the first column (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 12 and 28, Cheng teaches the comparison operation uses an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Regarding on claims 13 and 29, Cheng teaches a computer implemented method for aggregating data in a database, comprising:

Parsing from a command line, a command, a source table (column A), a destination table (MV), a source key, and a destination key (col. 6, lines 65-67);

Comparing the source key in each row of the source table with the destination key in each row of the destination table (col. 5, lines 64-67 to col. 6, lines 1-8);

Determining a set of update rows based upon the success of a comparison operation performed on the source key and the destination key (col. 5, lines 64-67 to col. 6, lines 1-8);

Determining a set of insert rows based upon the failure of a comparison

operation performed on the source key and the destination key (col. 5, lines 64-67 to

col. 6, lines 1-8);

Cochrane updating each row in the destination table with a row from the result of

the outer join operation containing a matching element in the first and second columns;

and inserting into the destination table each row from the result set of the outer join

operation with a non-matching element in the first and second columns. Cochrane

teaches, "to determine an insert or update is required, a DELTA-T table may be

recreated containing two rows; one to delete group A2 and the other to insert/update

group A3" (col. 5, lines 57-60). In addition, Cochrane teaches "insert returns any non-

matching groups, whereas the second operation, the update, return all matching

groups. These two operations can be combine together into an outer join, which return

both matching and non-matching group" (col. 6, lines 22-67). This teaches the results

of the outer-join operations are the updating all matching and inserting any non-

matching. Therefore, it would have been obvious to one ordinary skill in the art at the

time of the invention was made to include the updating the matching and inserting all

non-matching as the result of the outer-join in order to maintain the consistency

between the tables.

Regarding on claims 14 and 30, Cheng teaches combining the rows in the

source table, wherein the resulting source table has a unique source key in each row of

the source table (col. 8, lines 39-42).

Regarding on claims 15 and 31, Cheng teaches sorting the rows in the source

table based on the source key (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contain a

matching element in the source key (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 16 and 32, Cheng teaches the comparison operation uses

an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Contact Information

5.